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THE COLLEGE CURRICULUM*

By DR. KELLY.

This paper on the College Curriculum is published concurrently in the March issue of the Association of American Colleges' Bulletin.

The material here presented is taken right out of the laboratory. In the office of the Association and the Council of Church Boards of Education numerous studies of college curricula are being carried on and are in different stages of development. The fundamental material of these studies is furnished by the American Education Survey to which reference was made at some length at the last annual meeting of the Association.

As indicating not only something of the method of procedure, but that a consistent policy has been pursued in making the computations upon which the charts are based, the formula in terms of which the graphs have been constructed is given.

The method is yet in its elementary stage. It has been used in graphing approximately 75 cases, and is suggested as a tentative method of procedure. Before anything of finality is reached, about 300 programs covering institutions of all kinds, from all sections of the country, both those accredited by sectional and national associations, and those not so accredited, should be examined. (The credit allowed for elementary and intermediate Chemistry, for example, should be ascertained by canvassing the practice of a large number of institutions of good standing.)

(For Counting):

1. The measure of comparison is the semester hour, of which 120 to 128 are required for a degree. Term hours,

*The charts have been made under the immediate supervision of Miss Lura Beam, Associate Secretary of the Council of Church Boards of Education, who is chiefly responsible for the technique. Other members of the staff and numerous college officials have made valuable suggestions as the work has progressed.

credit hours, points, units, etc., were changed into semester hours.

2. Only courses actually given in the year of the catalog announcement are counted.

3. Only courses for which undergraduates are eligible are counted.

4. Only courses for which credit is specified are counted.

5. Two laboratory hours are counted as one recitation hour.

6. Two hours practical work in Physical Education are counted as one recitation hour.

7. On a sliding scale of credit (e. g., 3 to 4 hours) the lower is taken.

8. Elementary and intermediate work in foreign languages (even when 8, 10 and 12 hours credit are stated) are counted as 6 semester hours per annum.

9. Courses in "Methods" are counted under their respective departments unless they are taught by specialists in the Department of Education.

10. Foreign language courses given in English are classified under "Latin in English," "English," "History," etc., depending on the department offering them.

11. The number of hours given to junior college work and senior college work respectively are recorded.

(Many of the graphs show this difference by shading work for which only juniors and seniors are eligible.)

12. The written record is arranged in the descending order of succession, the department offering the greatest number of hours in the first place, the next greatest in the second place, etc.

(For Graphing):

13. The department offering the greatest number of hours is put in the center of the graph, the two next in order on either side, and this is followed down through the smallest departments.

14. Twenty-four semester hours are counted as a major; the combined offerings of departments teaching this amount constitute the area of specialization.

We report now upon a study which the Council of Church Boards of Education is making of certain colleges with Congregational affiliations. In the first place, twenty such colleges were selected from those whose data were accessible and comparable; colleges located in Florida, Georgia, Ohio and farther west. From the curricula of these colleges the median curriculum was calculated and constructed. The area of specialization in this curriculum included but seven departments: Latin, Greek, Mathematics, English, Chemistry, Biology and French. That is to say, the median Congregational college advertises a major in these seven subjects only. Not too much importance should be attached to this median curriculum since it included colleges of different stages of development. The fewness of these departments, however, and the fact that for the most part they are what may be called the "old line subjects," immediately attracted attention and led on to further investigation.

In these subjects the emphasis is placed consistently upon the major departments. The fact is not lost sight of that many colleges emphasize their minors which are brought together in groups. Sufficient justification for the present limitation of field is found in the fact that one thing at a time should be done. The question as to the different educational emphases found in the major system and the group system will be referred to later in this discussion and should be subjected to careful study by the Commission another year.

A word of explanation is given as to the meaning of the legends on the charts.

The *hours advertised* is an exact statement taken from the catalog of the college, deducting courses for which credit is not given and courses offered in alternate years as indicated in the formula above.

Hours offered is the exact statement of the institution

as to the courses offered, i. e., for which students registered and which were taught during the year for which the study is made. If the amount offered is less than the amount advertised, the degree of difference is indicated by single crosshatching; if the amount offered is greater than the amount advertised, the difference is indicated by double crosshatching.

Semester hours earned shows the quantitative relationship of departments as it is determined by student enrollment. To secure the earnings of each course the number of students in each course is multiplied by the number of semester hours credit granted by that course; the addition of the earnings of all courses within a department results in the total earnings of that department. This departmental product is expressed in horizontal bars applied over the diagram of advertisements and offerings. It is constructed differently from the original diagram to show that it stands not for semester hours advertised or offered, but for semester hours earned by student enrollment. The scale of construction is sixty-four times smaller than the scale for semester hours advertised and offered. The bars are comparable among themselves.

This process has the crudity of all quantitative measurements. It was thought inadvisable to introduce the qualitative measure (i. e., the amount of A, B, C, D, E and F credits) into a study already composed of several elements. It may later be considered in an individual study of that issue alone.

There is no way of showing without a supplementary study, the proportion of subjects prescribed and subjects elected in these particular cases. (The general practice of American institutions in the matter of prescribed subjects has been reported by the Bureau of Education.*

It must also be observed that the representation of subjects usually known as of junior and senior rank, e. g., Economics and Astronomy, in which ordinarily relatively few students register, will be smaller than that of subjects open to registration in all four years and smaller than

subjects taken by the larger numbers of sophomores and freshmen. This difference is more conspicuous in small institutions.

The advertised opportunity for specialization shows the departments in which at least a major (twenty-four semester hours) of work is advertised during the school year under observation.

This study ignores all courses offered in alternate years or more seldom. It was originally meant to ascertain the full offerings of every institution, but the varying practice of colleges in their catalog statements led to confusion in interpretation and resulted in the only method of counting which can be consistently applied without individual correspondence. Manifestly this is a hard measure for the very small college and the struggling department.

A CONGREGATIONAL MEDIAN COLLEGE

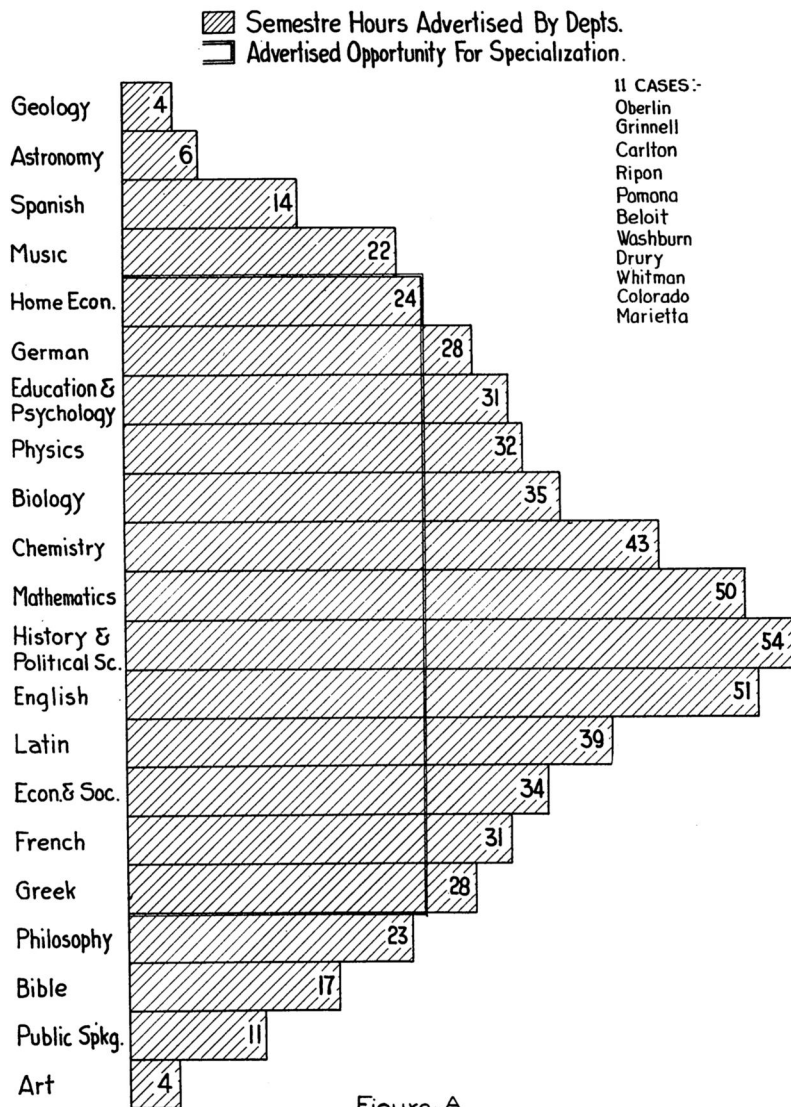


Figure A is the Median Curriculum made up from the catalog announcements of the Congregational colleges on the lists of leading standardizing agencies, except that the data concerning Knox and Middlebury are not included in this chart. This Median Curriculum includes as majors, Home Economics, German, Education and Psychology, Physics, Biology, Chemistry, Mathematics, History and Political Science, English, Latin, Economics and Sociology, French and Greek. Perhaps this might be called the administration's idea of what a standard college curriculum ought to be, or of what a standard college ought to be prepared to offer to its students. At least, this is the Median of what is announced in the several catalogs.

All the subjects in the first list given are included but the list as a whole is not so definitely restricted to subjects which may be called disciplinary or cultural.

In this Median college opportunities are announced for majoring in two ancient and two modern languages and in five sciences (including the ancient subject, Mathematics, and the modern subject, Home Economics). It is noteworthy that History and Political Science stand first in the number of hours offered, and that Education and Psychology and Economics and Sociology are included among the majors. It is equally interesting that Philosophy falls somewhat short of a major as does Music, while less than a minor is offered in Bible, Public Speaking and Spanish. A total of twenty-one departments are announced.

This medium of institutions of a specific group is subject to all the difficulties of combining not exactly similar things. These institutions have their idiosyncracies. History and Political Science were combined to carry out the practice of the greater number of cases. If they were not so combined, English would be the core of the curriculum. If they were cut apart, there would remain a major in History: Political Science might in some cases have to be buttressed with Economics or Sociology to make a full twenty-four hours' work in any given year. The two latter departments, generally restricted to the junior and senior years would not, if separated, make potential major subjects. There would, however, be enough of their point of view adequately to broaden any allied subject and hence make a unit.

In the same way, if the Education and Psychology were cut apart, a major in Education would remain but not one in Psychology. Psychology, if grouped with Philosophy would make a major in that department. The work in Home Economics just achieves twenty-four semester hours by the inclusion of all the work in Methods of that department. It would not reach it on technical work alone.

The work in Music might very possibly be a major subject if all institutions definitely announced their full credit.

There would surely be a median minor in Bible if courses given in alternate years were included, but this measure is omitted for every institution and every department.

A COLLEGE OF 700 STUDENTS

Semestre Hours Earned By Departments.

1919 - 1920

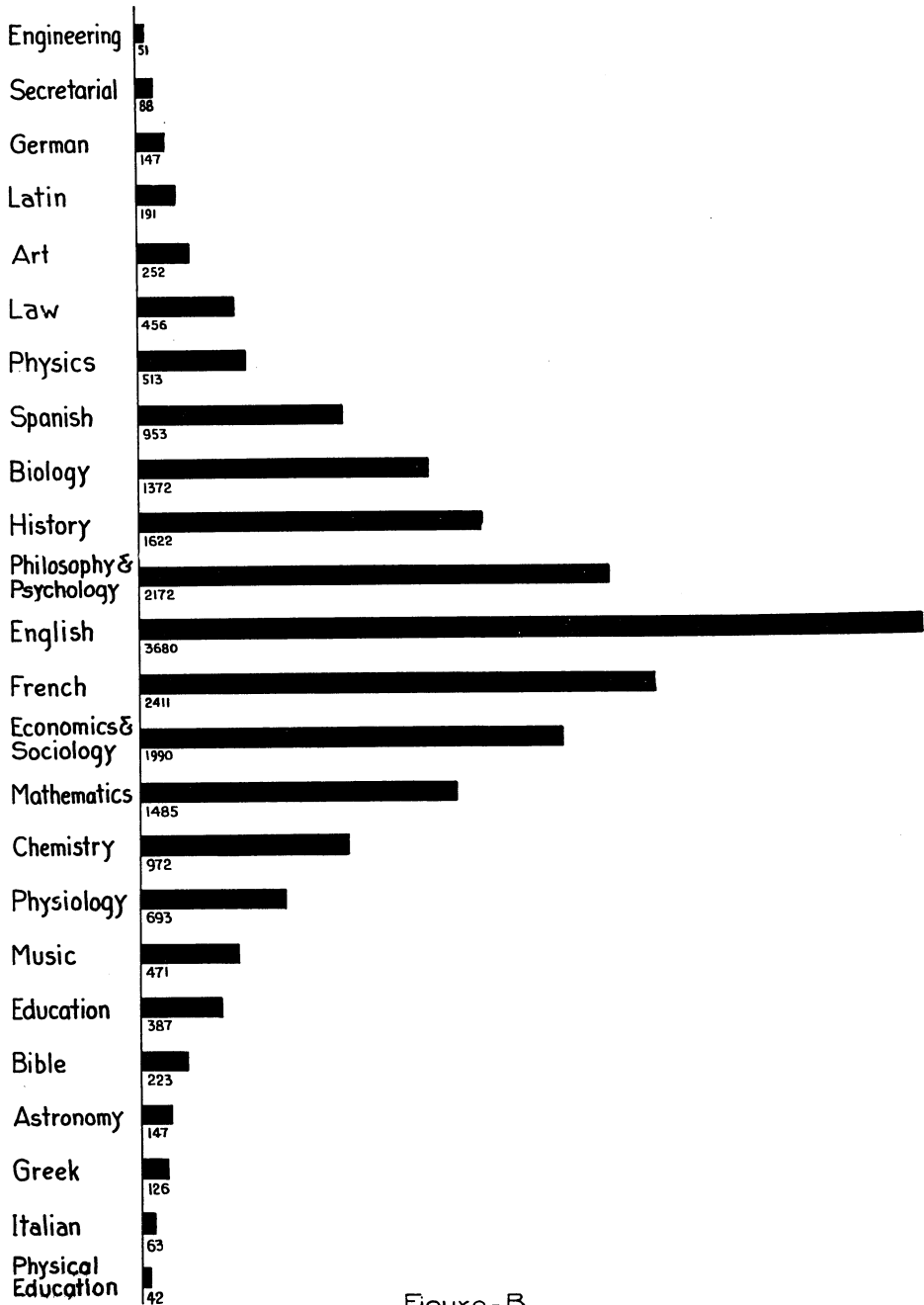


Figure - B

FIGURE B

This figure shows only the semester hours earned in the several departments of a coeducational college of 700 students. English leads all other departments, with French second, Philosophy and Psychology, Economics and Sociology, History, Mathematics, Biology, Chemistry and Spanish following in order.

The total semester hours earned in these nine departments is 16,657 as compared with 3,850 in fifteen other departments. This is a striking illustration of the tendency toward concentration in student election and raises anew the question as to whether the tendency of many curriculum builders toward horizontal spreading is economically or educationally justified.

Not only does this chart show the tendency toward concentration in hours earned by students but also the tendency toward the modern socialized subjects in the curriculum. Of the nine leading departments, only two, Mathematics and Philosophy, belong to the traditional college course.

A COLLEGE OF 1000+ STUDENTS

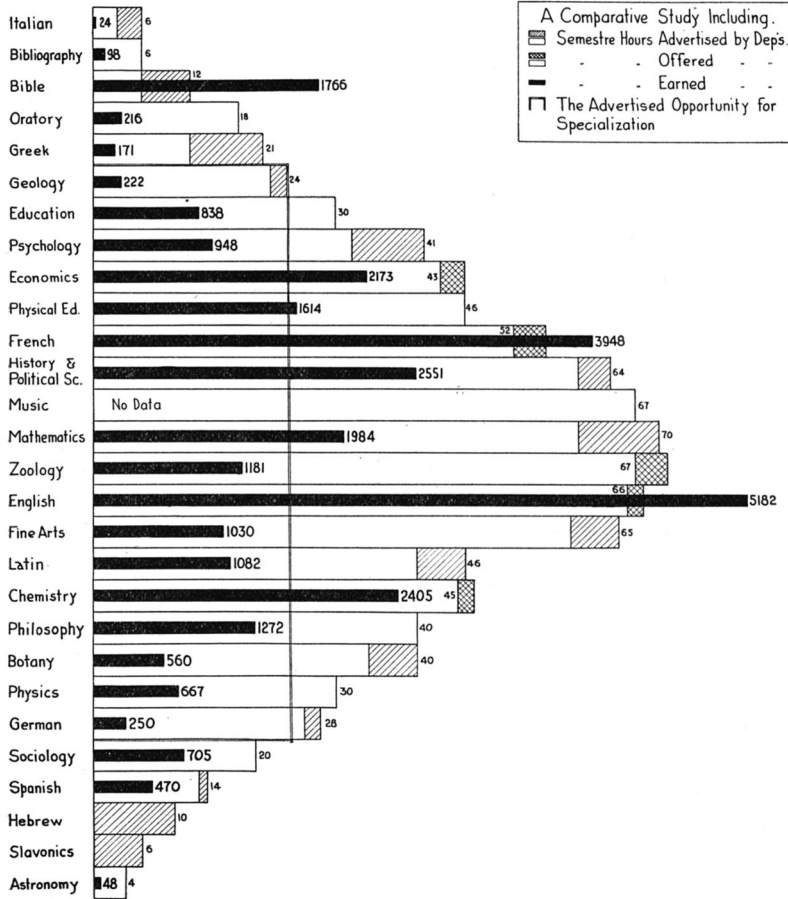


Figure-C

Of the eighteen major departments, six, at least, offer a double major of work or more, and all but two offer at least a major. (Music data not available.) In Economics, French, Zoology, English and Chemistry more work is offered than advertised. In Greek, Hebrew and Slavonics only is there any marked discrepancy between work advertised and offered. English leads in hours earned and is followed by French, History and Political Science, Chemistry, Economics, Mathematics and Bible. Of the hours earned 27,907 are within the area of specialization, and only 3,498 without this area. Of this number more than half, 1,766, are in Bible.

This is a coeducational college.

A COLLEGE OF 400 STUDENTS

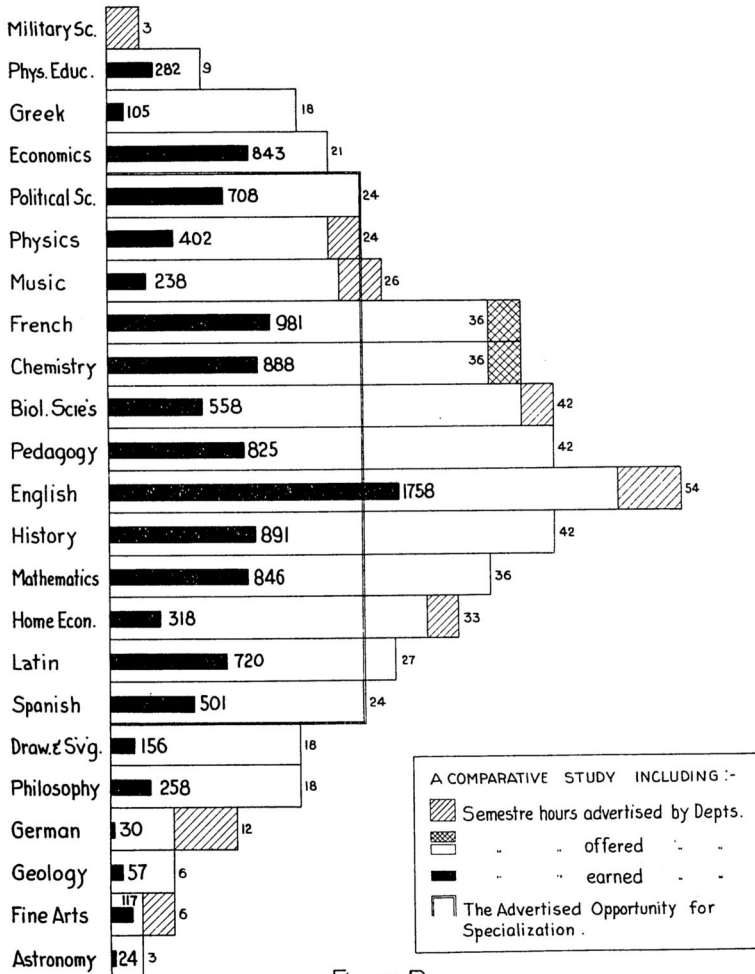


Figure-D

A coeducational college which has evidently found its task, there being a remarkable correspondence between the work advertised and offered. In all but two of its advertised majors a major or more of work is offered. In two of its majors more work is being offered than advertised; in six they exactly correspond. Of the thirteen majors two only are from the traditional curriculum. English stands first in semester hours earned. Nearly all of the majors are strong in this particular. The accidental juxtaposition of hours earned in Greek and Physical Education is interesting. Both departments are on the elective basis.

A COLLEGE OF 400 STUDENTS

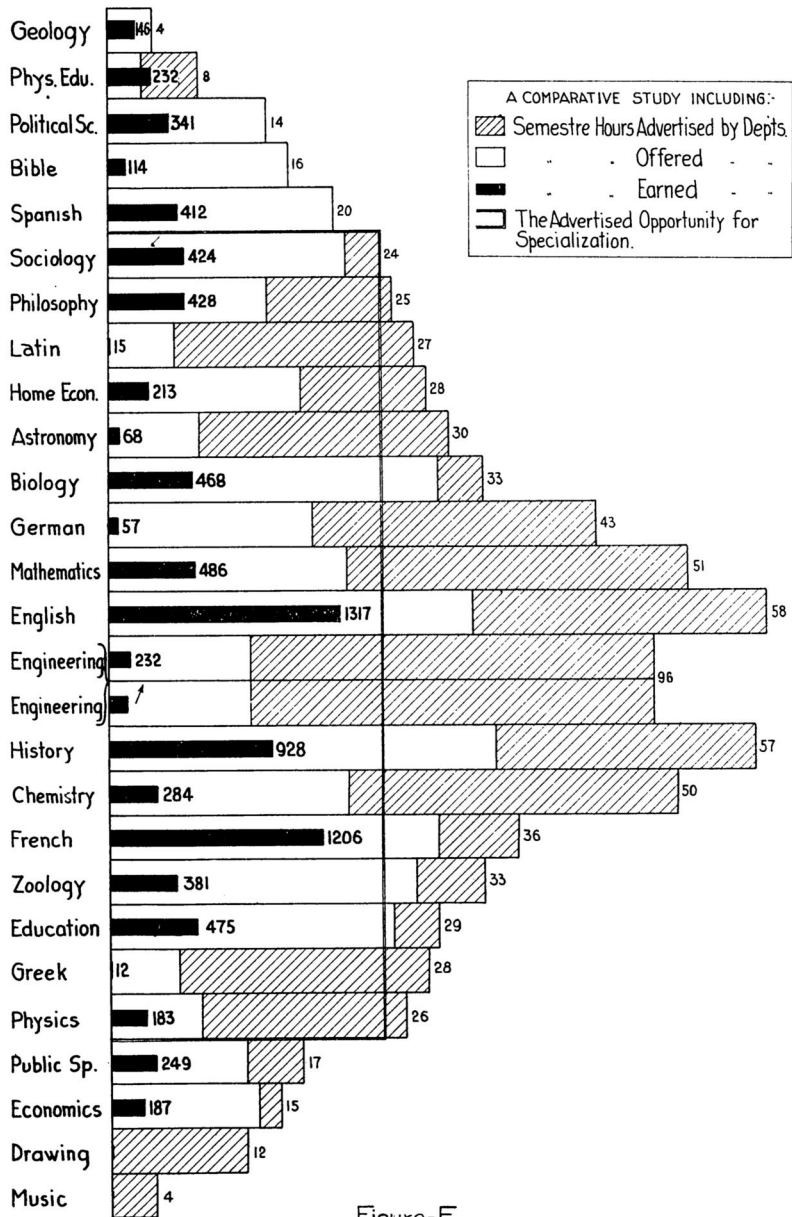


Figure-E

FIGURE E

Another coeducational college of 400 students. This college announces eighteen major departments, including the traditional subjects, Philosophy, Latin, Greek and Mathematics. Of the eighteen, six only offer a major's work. In eight of the eighteen major departments not half of the work advertised is offered. Of the total number of major courses advertised slightly more than half are offered. Only one subject—Spanish—is advertised as a minor. In this subject as in Bible and Political Science all the work advertised is offered. In the catalog advertisement Engineering is included as a department of the college and not as a separate school. It shows the greatest discrepancy between advertisement and offering. Note three distinct groups of major departments. If in this case, as in some others, Zoology had been grouped with Biology, the hours earned in Biology would have reached nearly to the earnings of the first departmental grouping.

A COLLEGE OF 300 STUDENTS

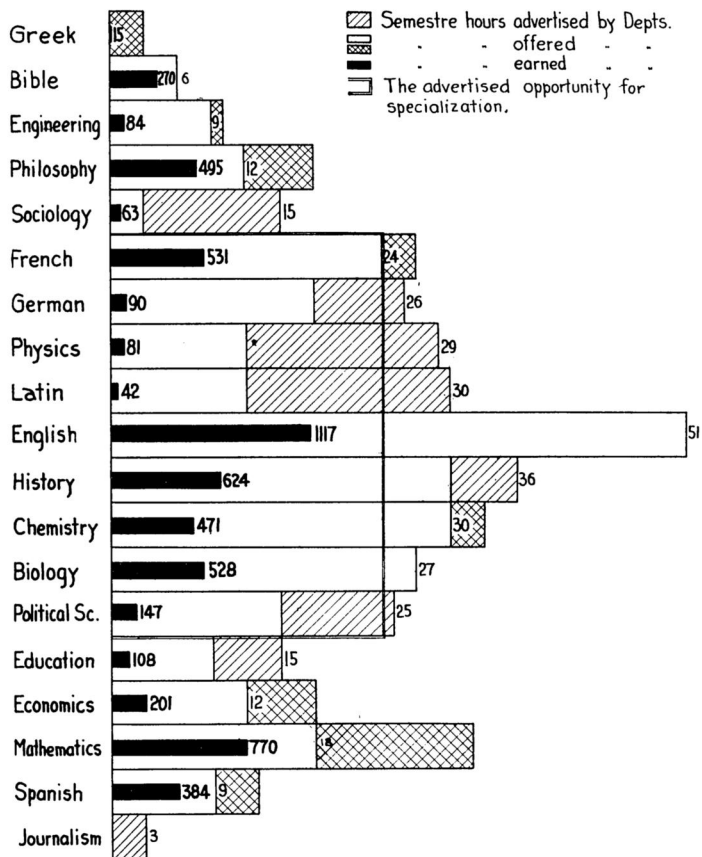


Figure-F

FIGURE F

Figure F gives four types of information, as indicated by the legend, concerning a coeducational college of 300 students. A major or more of work is advertised in the catalog in nine departments, English assuming the central place with fifty-one semester hours. Within the area of specialization the curriculum is strikingly modern.

Mathematics does not appear among the advertised majors although in student hours earned it is second only to English.

In English and Biology the courses offered exactly correspond to the courses advertised. In French and Chemistry more courses are offered than are advertised in the catalog. In all other major departments the offerings fall short of the announcements, in Physics and Latin notably so.

Among the subjects in which a major is not provided for in the announcements more courses are offered than advertised in Greek, Engineering, Philosophy, Spanish, Mathematics and Economics; indeed, more courses are offered in the sub-major subject Philosophy than in the major subjects Physics and Latin.

In the matter of semester hours earned, English stands first, Mathematics, announced as a sub-major, second, and History, French and Biology in order. In proportion to the number of hours advertised more semester hours are being earned in Bible than in any other subject in the curriculum.

The advertised area of specialization includes nine departments. Of these, five only, French, English, History, Chemistry and Biology, are within the area of specialization measured in terms of hours earned. Add to these Mathematics, and you have a college of three hundred students specializing in five departments, although courses are being offered in eighteen departments.

A COLLEGE OF 100 STUDENTS

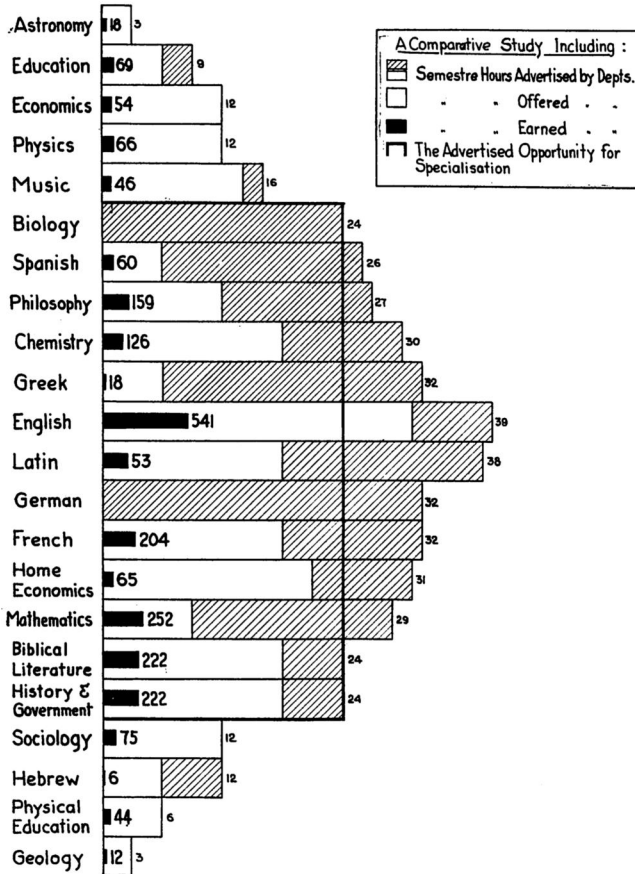


Figure-G

Thirteen major departments are advertised; a major's work in English only is offered. No minors are announced, but the equivalent of a minor's work is being offered in seven major departments. Students register to the limit of the announcements in Economics, Physics and Sociology. English leads in hours earned, followed by Mathematics, Biblical Literature, History and Government and French.

The Professor of Biology is on leave. The A. B. degree requires six semester hours in History and Government, Biblical Literature and Mathematics, and this fact is reflected in the hours earned in these departments. The college announces that it wishes especially to serve a rural field.

A COLLEGE OF 65 STUDENTS (RURAL, MIDDLE WESTERN)

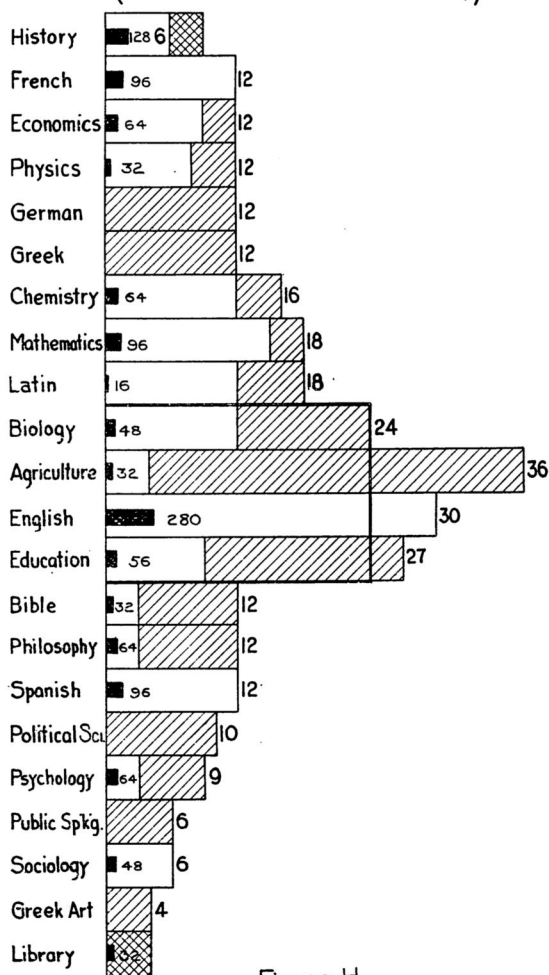


Figure-H

This is a small college with only four majors announced. There is an apparent effort to adapt the major courses to the local agricultural constituency, but the department of English alone offers all its advertised courses. In practice more work is offered in the minors than the majors (English excepted). In French, Spanish and Sociology the students take all the work advertised; in History and Library Science, more than the work advertised. The institution in hours earned is more nearly a junior college than a standard college.

A COLLEGE OF 700 STUDENTS

Distributed in terms of courses and semestre hours
between Social, Cultural, Professional and Scientific Training

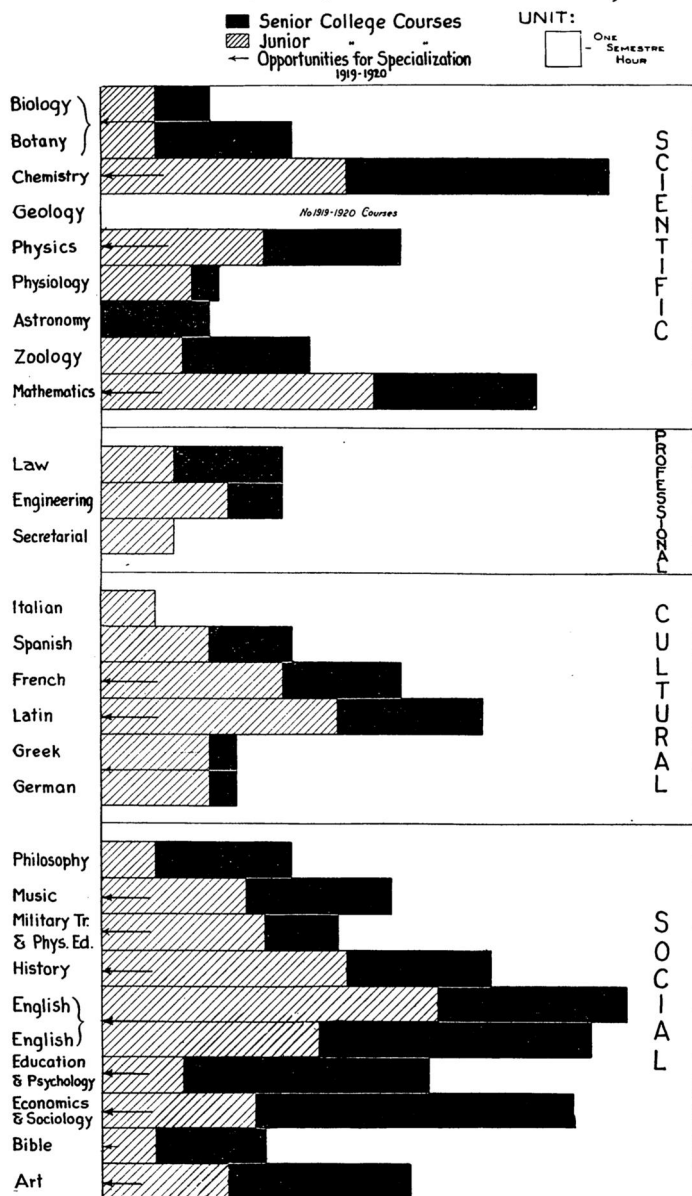


Figure 10

FIGURE K

Figure K shows functional tendencies as well as quantitative differences. Horizontally the subjects are arranged in groups; perpendicularly the difference is shown between junior and senior college work. (Junior college work is work advertised for freshmen and sophomores; senior college work, that advertised for juniors and seniors.)

In cases where the college does not specifically state the distinction, the course is allocated according to standard current practice.

The college advertises majors in four sciences: Biology, Chemistry, Physics, Mathematics; in two languages: French and Latin; and in seven subjects not so easily classified: Music, Military Training and Physical Education, History, English, Education and Psychology, Economics and Sociology and Art. No major is advertised in the professional group. If the sciences and foreign languages may be termed *cultural* and *disciplinary*, the other subjects *social* and English both, there is a perfect balance between the two motives, English being the core of the entire curriculum.

It is impossible, of course, arbitrarily to assign a subject to one of the above classes. The qualitative element of instruction is an important determinant. However, elementary work in foreign languages and in such sciences as Chemistry, Biology and Mathematics could scarcely be referred to as having social value. The same statement applies to Art and Music in their elementary forms, especially elementary practicum. In general the large amount of junior college work included under the sciences and foreign languages of itself justifies the classification given.

There is also an approximate balance in amounts of junior and senior college work advertised. Astronomy is the only subject in which all the work advertised is of senior college grade. The largest relative proportion of junior college work is in the language group. The catalog offers elementary language work for college credit in six different languages with apparently no discount on the credit.

This is the same college as that shown in chart B. A comparison shows that the heaviest enrollment of students is in major subjects, although Physics, Latin, Music, Physical Education and Art drop out of the preferred class and the minor Spanish comes to the front.

This college states in the catalog its aim "to prepare its graduates for special distinction in whatever later callings they may choose."

i

2

Figure-M

In spite of the danger incident to interjecting judgments into measurements and the other danger of appraising means of accomplishment while the ends are still under discussion, we report an effort to balance certain intellectual values of a few undergraduate departments.

These values are: first, the theory and content of a subject, including its historical development; second, its mechanics and technique from the most elementary to the most advanced form taught in college; third, the senior college courses which stress intensive work in narrow and highly specialized fields; fourth, the amount of application possible or desirable. No theoretical proportion is suggested for any case.

The departments selected for illustration, all offering courses for the full four years, are English, Foods and Nutrition, and Physical Education.

In Chart M an attempt is made to set forth this functional distribution of the content of certain departments of English. In the case of the college of eleven hundred students it is shown that approximately the same number of hours are devoted to the *theory, technique, intensive study* and *application* of English. The amount of time devoted to the mechanics of English is noteworthy in view of the heavy English requirements for entrance. The phase of theory and content is covered moderately. There is in the senior college courses copious material requiring intensive work. The most striking feature of this college's offerings is found in the field of *application*. This institution has a theatre in which types of original work are presented by student casts.

The college of eight hundred students has a fairly well balanced program with relative emphasis on intensive study. Application is confined to the two fields of journalism and teaching.

The college of three hundred and fifty students has a rather modest English program with scant attention to application and a year's work in technique.

The college of five hundred students emphasizes

Chiefly Food, Nutrition and Household Administration.

- 1.- Theory Content
- 2.- Mechanics Technique
- 3.- Intensive Senior College Courses
- 4.- Application

* Credit not stated

Figure - 2

theory and intensive study. Nothing appears under the head of application.

The possibilities of departments of French may be tested in the same manner and will be found to graph very much as do departments of English. Two important questions raised by the visual presentation of the facts are "How much work in mechanics and technique should be given for college credit?" and "Is it profitable to give in college modern language work which hardly goes beyond training in mechanics and technique?" Bryn Mawr College settles this question in its own case by giving no elementary and intermediate courses for credit. Various colleges meet the problem by giving one elementary course for beginners, one for entrants presenting two units and one for entrants with three units. This presents the philosophy of the issue with cruel distinctness to the small college offering such an assortment of work as elementary and intermediate French, History of the Drama, Old French and Teaching of French.

Figure N illustrates two institutions giving the B.S. degree for technical work in their Schools of Home Economics and one college of liberal arts offering a major in that department which leads to state certification of teachers.

The three departments are not comparable for this reason and for the fact that Institution II illustrates a combination of the departments, Cookery and Nutrition. The work in Nutrition is added to illustrate the possibilities of cross election in an institution offering Home Economics on this scale. It furnishes a background entirely different from that which the liberal arts college commonly supplies. It is not intended to suggest that a student could major in both departments.

Institution I offers comprehensive training in many branches of Home Economics.

Institution II offers very ample work in technique. It covers half a dozen phases of cookery. The theory and content phase goes liberally into the undergraduate fields of

DEPARTMENTS OF PHYSICAL EDUCATION

Distributed By Function

In Courses And Semester Hours

1. Theory Content
2. Mechanics Technique
3. Intensive Senior College Courses
4. Application

INSTITUTION IV

A four year course leading to the B.A. degree and a Special Diploma

Theory Content	Mechanics Technique	Intensive Senior College Courses	Application
Theory of Physical Education	Elem. Gym.	Adv. Gym.	Practical Work
Anatomy	Medical Gym.		Phys. Exam
			Diagnosis

FOR MEN

Anatomy	El. Gym	Adv. Gym	Practical Work
Theory of Physical Education			
History of Physical Education			
Therapeutics			

Credit not designated *

INSTITUTION V

A four year Technical Course leading to the B.S. degree and the professional diploma

Theory Content	Mechanics Technique	Intensive Senior College Courses	Application
Hygiene	Physical Tr.	Recreation	
Hygiene	A	Social Centers	Anthropometry
First Aid	B	Advanced Teaching	
Anatomy	C	Practice of Hygiene	
	D	Phys. Ed.	

Applied Physiology	Formal Gymnastics	The Dramatic Game	Experimental Playground
History of Physical Education	Dancing & Play	Childhood	
Kinesiology	Phys. Ed. & Athletics	Playgrounds & Community Centers	Practicum
Educational Hygiene	Games & Recreation	Club Leadership	
Methods in Physical Education	Games & Recreation	Diagnosis	
Hygiene of Childhood	Physical Education	Expression in Physical Educ.	
Corrective Gymnastics			

Hygiene of Childhood	Club Leadership	Diagnosis	
Corrective Gymnastics			

INSTITUTION VI

A five year course leading to the B.A. degree and the certificate of the Dept of Hygiene

Theory Content	Mechanics Technique	Intensive Senior College Courses	Application
Kinesiology	Normal Instruction		Prac Tchg
Symptomatology	Corrective Gym		Anthropometry
Hygiene	Theory & Methods		Practical Dem.
Anatomy	Tabular		
History & Lit.	Phys. Games		
Physiology	Massage		
Health Problems	Corrective Gym	*	
Gymnasium	Dancing	*	
	Outdoor Sports	*	
	Horseback Riding	*	
	Swimming	*	
	Correctives	*	

Not counted toward degrees. Credit not easily counted may be too liberal.

nutrition and dietetics and is greatly amplified by the additional special adaptation of work prescribed under the department of Chemistry. The intensive work of the senior college year goes into technical problems involving advanced laboratory methods, together with work in application requiring practice in several fields.

Institution III gives a rather simple group of subjects, apparently almost those which might be valued by any woman in the administration of her own home.

Figure 0 can only suggest current practice in Physical Education in institutions of different aims:

The institution giving a technical course centering on this major interest (together with the English, History, Science and Modern Language of the ordinary junior college years and some prescribed work in Music) gives a great amount of theory. A profession which must be prepared for chiefly in the college years, without special high school training as an entrance requirement, must of necessity also give a great deal of mechanics and technique. All the intensive senior college courses have specific reference to application.

The institution giving the five year course has built a less exclusively professional program. Its work is rather more like that of a departmental major. It does not go into intensive fields, but gives a modest amount of work in theory and health amplified by instruction in games, sports, some elementary work in correctives and the conventional work in application.

Work in swimming, dancing, outdoor sports and horseback riding is not counted toward the degree. The credit hours are hard to count in this institution and the estimates may err on the side of liberality.

The remaining institution stresses predominantly the side of theory and content. Such terms as "Physical Training" and "Elementary Gymnasium" are large enough to cover all kinds of practice on the side of mechanics and technique.

PRINCIPLES AND TENDENCIES

Certain tentative conclusions may be stated here chiefly for the purpose of focusing attention upon questions more or less vital in the organization of the college curriculum.

1. There is without doubt *a persistence of certain traditional subjects in the catalog announcements*. No longer do these colleges announce Mental or Moral or Natural Philosophy or Metaphysics or even Logic as an unrelated subject. Philosophy, however, appears in every catalog announcement covered by this study although rarely as a major department of itself. In most instances in which there is a major in Philosophy the department includes either Psychology or Education or both.

Hebrew has almost vanished from catalog announcements. One college only among those charted advertises Hebrew and this college did not offer it during the year covered by the study.

Greek is found as an advertised study on every chart. It is a major department in the median curriculum. When it comes to hours offered and especially to hours earned, Greek is almost negligible, although one institution offers more than it advertises. Where Greek makes a stronger showing, it is usually bolstered up by a college requirement.

Latin is usually included within the announced area of specialization, although it attains the major standing in hours offered and earned, only in the college with 1,000 students and in a college in which Latin or Greek is required. Other traditional subjects such as Mathematics, History and Chemistry not only persist in the announcements, but rank high in student preference. History and Chemistry, of course, are traditional in name rather than content.

2. There is a marked *tendency toward student registration in the modern subjects*. English is uniformly the core of the curriculum. French ranks second in a surprising number of cases, its relative position as a foreign language being due undoubtedly to the war. The other subjects which colleges offer freely and which students prefer

are Chemistry, as indicated above,—another war product, no doubt—History, especially when linked with Government, and Political Science, Economics and Sociology, Philosophy (coupled with Psychology or Education) and the biological sciences. Mathematics is mentioned last, not because it falls in the last place—it is usually among the three or four preferred subjects—but because it is not “modern.” It is the most striking instance of the persistence of a traditional subject.

3. There is a tendency toward *horizontal spreading in curriculum building*. The typical college administrator continues to think of his institution as an omnibus. The prevailing ideal still is “to teach,” or at least, to advertise in the catalog, “every thing useful in creation.” This tendency is not so marked with the Congregational colleges which are among the educationally conservative groups; in this respect they are not typical. Their leaders stand for the integrity of the four years’ college course, for the liberal college of arts and sciences, for the “New England” type of American education. And yet, even here, we find a good many departments. The total number of departments of the median curriculum is 21, of the college with 1,000 students 28, of one of the colleges of 400 students, 27, and of the colleges with 100 and with 65 students, 22 each.

4. This tendency toward horizontal spreading is all the more striking when compared with the decisive *tendency toward concentration in student elections*. This has been covered by implication in the paragraph on student registration in the modern subjects. But the full significance of the tendency toward concentration was not stated there. In the college of seven hundred students which advertises twenty-four departments, the great bulk of the student registration is in nine departments. In one of the colleges of four hundred students the enrollment is chiefly in six departments. The college of three hundred students has only five departments within the area of specialization expressed in terms of student registration. In general it may be said that the stronger colleges have relatively slight

enrollment without the area of specialization. In each case, from the quantitative standpoint alone several departments could be omitted without serious interference with the work of the college.

Of course, it is not ordinarily desirable to eliminate departments only because they do not "pay" as a department store might do. It is possible to be guided by the principle of "major and service lines of work" laid down by the Bureau of Education.*

Furthermore, these charts seem to point to certain departments as major lines of work and others as service lines of work in the college of liberal arts and sciences in accord with this principle. In ten strong Congregational colleges the media of six departments in which most students are registered, in order are English, French, History and Political Science, Mathematics, Economics and Sociology, Chemistry. In ten of the weaker Congregational colleges the media of the six in order are English, History and Political Science, French, Chemistry, Mathematics, Education and Psychology. These are the same subjects in slightly different order with Education and Psychology taking the place of Economics and Sociology in the latter list. In the college of seven hundred students there is a slight variation only: English, French, Philosophy and Psychology, Economics and Sociology, History and Mathematics.

5. It is certain that the whole subject of *college credit for beginning and intermediate work* should be carefully canvassed. There is at present great variation in the practice of excellent institutions in this matter. Many factors enter into the problem. The discussion of this point must necessarily be postponed.

6. There is also an approximate balancing in the catalog announcements of what Dr. Osler referred to as the *old humanities and the new science*. An analysis of this

*U. S. Bureau of Education, Bulletin 1916, No. 19, p. 50 ff. No. 26, p. 102 ff.

situation is given somewhat in detail in connection with Figure K. If one runs through the successive "areas of specialization" he will note the presence in about equal proportions of those subjects which are usually defended as of cultural and disciplinary value and those of social content and motive. Here again, however, the student registration interferes with this ideal balancing. As already pointed out, Mathematics is in practise the disciplinary subject *par excellence*, although the predominantly elementary science and language work followed in most colleges must be classified as of personal rather than social value. The disposition of college authorities is to provide both for the arts and the sciences, not to make a college with undue emphasis on either group of studies.

7. Closely akin to this point is the manifest effort in some cases to *adjust the curriculum to the constituency*. One small college with a rural constituency advertises such an adjustment in the catalog, but the students register without reference to the catalog plan. Another small college with a rural constituency advertises thirteen major departments and the students elect a major of work in one of them. The subjects chiefly taken in this college are English, Mathematics, Biblical Literature, History and Government, Philosophy, French—no striking irregularities here! As already pointed out, the same subjects are elected in the strong and the weak colleges. This may be contrasted with the enrollment in the large colleges of New York City, for instance, which is overwhelmingly vocational.*

8. A more serious fact is that not much progress has been made or effort expended in *adjusting the curriculum to the college resources*. The weak and struggling college announces about as many departments as the strong and well equipped college. Undoubtedly in many colleges much

*Columbia requires of all freshmen a 5 hour course in *Contemporary Civilization*, and the College of the City of New York requires a course of senior college students on *American Civilization*.

work is advertised which could not possibly be offered if by some unexpected turn of the wheel of fortune students should register for the work. Some of the offerings of colleges, furthermore, are on false assumptions as to cost of instruction. It is not more economical to maintain a Professor of Latin with small classes than a Professor of Chemistry with large classes. In the studies of the cost of the student clock hour at the University of Washington* it was shown that in that institution Latin and Greek were among the most expensive subjects to teach and the sciences the most economical. No college studied would profess that it had adjusted its curriculum entirely to its resources. Few colleges or even standardizing agencies have seriously faced this problem. Attention is called to "Administrative Suggestion" number six of the Regents of the State of New York, effective July 1, 1920—"The curriculum should have justifiable relation to the resources of the institution."**

*U. S. Bureau of Education, Bulletin 1916, No. 26; U. S. Bureau of Education, Bulletin 1919, No. 15.

**Regents Rules, Section 24 and 400-c.